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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/813,306	03/21/2001	Osamu Kasono	040894-5644	1542

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EXAMINER

CHU, KIM KWOK

ART UNIT	PAPER NUMBER
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2653

DATE MAILED: 09/03/2003

7

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/813,306

Applicant(s)

KASONO ET AL.

Examiner

Kim-Kwok CHU

Art Unit

2653

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Amendment filed on 6/12/03 (paper 6).
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Response to Argument

1. Applicant's Remarks filed on June 12, 2003 (paper 6) have been fully considered but they are not persuasive.

(a) Applicant states that the prior art of Van Rosmalen do not detect "foreign material fitted onto the surface of the information medium" (page 6 of the Remarks, last two lines). Accordingly, Applicant's two examples of foreign material are dust and surface protrusion (page 5 of the specification, lines 20-24). Therefore, to properly read/write data in a recording medium, the foreign material such as dust and protrusion should be avoided by all optical lens drive during a disk surface scanning operation.

To prevent a scanning lens from crashing into the foreign material, Applicant uses a detector to detect "the height of the foreign material on the information reading surface of the recording medium (page 7 of the specification, lines 1 and 2). Similarly, Van Rosmalen uses a detection system which provides a signal depending on the instantaneous position and orientation of the auxiliary lens with respect to the record carrier (Fig. 4A; column 3, lines 42-44). In other words, to maintain a relative distance between a foreign material such as a surface protrusion and the auxiliary lens, Van Rosmalen teaches that "the position and orientation of the second lens unit, or rather the auxiliary lens 17, with respect to the surface 1b are constantly

controlled" (column 7; lines 13-16).

(b) Applicant's invention is not to distinguish a foreign material but to keep the SIL lens a certain distance from a disk surface based on maintaining a proper height above the disk surface similar to Van Rosmalen's.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1-7 are rejected under 35 U.S.C. § 102(e) as being anticipated by Van Rosmalen et al. (U.S. Patent 6, 130,418).

Rosmalen teaches an optical head apparatus having all of the steps recited in claims 1 and 2. For example, Rosmalen teaches the following:

(a) as in claim 1, the optical head is in an optical path of a light beam between an objective lens 15 and an information recording medium 1 (Fig. 1);

(b) as in claim 1, an immersion lens 17 to increase a numerical aperture in the light beam (Fig. 1; column 5, lines 1-3);

(c) as in claim 1, a movement unit 55a-55c for moving the immersion lens 17 away from the information recording medium 1 in accordance with a control signal (Fig. 1; column 7, lines 13-17, 47-60);

(d) as in claim 1, a detector 65 for detecting a foreign material to a surface of the information recording medium 1 (Fig. 1; detector 65 measures the recording medium's surface in order to maintain a proper height; a foreign material such as dust molecules and surface unevenness are always exist in the air gap under detection by detector 65; column 2, lines 27-34, 38-48);

(e) as in claim 1, a controller 83 for outputting the control signal to move the immersion lens 17 to a position higher than a height of the foreign material (Fig. 1; maintaining proper distance; column 2, lines 27-34, 38-48);

(f) as in claim 2, the movement unit includes a magnetic field generator 55a-55c for generating a magnetic field with an intensity corresponding to the control signal (Fig. 1);

(g) as in claim 2, a magnet 53 integrally provided with the immersion lens 17 (Fig. 1; magnet 53 is joined with immersion lens 17); and

(h) as in claim 2, said controller 83 outputs the control signal for the magnetic field generator to generate a magnetic force for moving the immersion lens 17 to the position higher than the height of the foreign material in accordance with the detection result of said detector (Fig. 1; column 2, lines, 38-48).

4. Claims 3-7 have limitations similar to those treated in the above rejection, and are met by the reference as discussed above. The prior art of Van Rosmalen also teaches the following:

(a) as in claim 4, the detector 65 is arranged at an upstream position of the immersion lens 17 in a rotational direction of the information recording medium (Fig. 1);

(b) as in claim 5, the detector 65 is arranged in a same radial position as the immersion lens (Fig. detector 65 is located in a direction of the radius of the immersion lens 17);

(c) as in claim 6, an illumination light source 71 that illuminates an incident light beam toward the surface of the information processing medium 1 (Fig. 1);

(d) as in claim 6, the illumination light source 71 is oriented in a manner such that the incident light beam is reflected on the surface of the information recording medium in a first direction when the information recording medium is free from foreign material, and, if a foreign material is disposed on

the surface of the information recording medium, the incident light beam is scattered by the foreign material in a second direction toward the detector (Fig. 1; inherent property because a foreign material such as a protrusion on the medium surface 1 scatters an irradiated light beam in different directions); and

(e) as in claim 7, the detector 65 generates a light detection signal proportional to an amount of incident light that is scattered by the foreign material (Fig. 1; inherent property of the detector 65 because it detects the variation of light intensity which includes any scattered light as long as the scattered light is reflected back to the lens 59a).

Prior Art

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Berg et al. (6,178,151) is pertinent because Berg teaches a flying head with an height adjustable actuator.

Greve (6,166,808) is pertinent because Greve teaches a height measuring meter for a surface inspection apparatus.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action.

In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action

7. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks Washington, D.C.
20231 Or faxed to:

(703) 872-9314 (for formal communications intended for entry. Or:

(703) 746-6909, (for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2021 Crystal Drive, Arlington. VA., Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-4700.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kim CHU whose telephone number is (703) 305-3032 between 9:30 am to 6:00 pm, Monday to Friday.

Kim-Kwok CHU
Examiner AU2653
August 21, 2003

(703) 305-3032

William Korzuch
WILLIAM KORZUCH
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